

Green Technology In Wastewater Treatment Technologies: Integration Of Membrane Bioreactor With Various Wastewater Treatment Systems

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ABSTRACT

The increasing concerns of water resource are becoming an important issue as severe shortage of water has been seen throughout the world. Though membrane bioreactor (MBR) has made an enormous progress and has become a promising approach in wastewater treatment, there are still several limitations on conventional MBR and thus there emerged integrated MBR for wastewater treatment technology. This paper aims to provide a consolidated review on the current state of research for the integrated MBR system with other technologies for wastewater treatment and help to sustain the treatment process itself. The areas for potential applications of various types of MBR are discussed in this review article. It is expected to provide future prospects to implement integrated MBR as a promising wastewater treatment technology. The valorization of wastewater in integrated MBR would reduce pollution and more importantly open a new source of energy and nutrients. Moreover the integrated MBR makes energy and nutrient recovery to be environmentally and economically feasible.

KEYWORDS: Ozonation; Membrane fouling; Osmosis; Microbial fuel cell; Biofuel

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